

Interview Summary

Application No.

09/686,112

Applicant(s)

LOVE, BRADLEY C.

Examiner

Joseph P. Hirl

Art Unit

2121

All participants (applicant, applicant's representative, PTO personnel):

(1) Joseph P. Hirl.

(3)_____.

(2) Cary Tope-McKay.

(4)_____.

Date of Interview: 6/29/4, 7/7/4.

Type: a) ☒ Telephonic b) ☐ Video Conference

c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☐ No.

If Yes, brief description: _____.

Claim(s) discussed: All.

Identification of prior art discussed: _____.

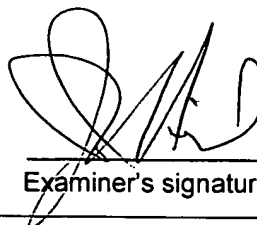
Agreement with respect to the claims f) ☒ was reached. g) ☐ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Agreement was reached on the claims per the attached document.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.



Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

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What is claimed is:

1. An apparatus for incorporating decision making into classifiers to provide efficient test recommendations, the apparatus comprising:
 - a. an explicit system and a classifier each configured to receive a system state vector the explicit system connected with the classifier and operative to iteratively perform a combinatory search procedure based on the system state vector to develop a next test recommendation for the classifier, whereby the classifier performs the next test to generate an objective weighted score;
 - b. a profit module connected with the classifier and with the explicit system to receive the objective weighted score from the classifier, to add subjective value to the objective weighted score to determine a profit for the test, and to provide the profit to the explicit system to enable the explicit system to i. assess the value of its next test recommendation and ii. to iteratively generate a best test recommendation based on the maximization of the profit;
 - c. an implicit system configured to receive a system state vector, and connected with the explicit system to receive the best test recommendation for each system state vector, and to act as a function estimator to learn to associate best test recommendations with the system state vector in order to mimic the explicit system, thereby to enable rapid decision making in situations that are either urgent or well-known.
2. An apparatus for incorporating decision making into classifiers to provide efficient test recommendations as set forth in claim 1, wherein the explicit system and the implicit system are configured to provide test recommendations to a controller.
3. An apparatus for incorporating decision making into classifiers to provide efficient test recommendations as set forth in claim 1, wherein the implicit system is a neural network.

4. An apparatus for incorporating decision making into classifiers to provide efficient test recommendations as set forth in claim 3 wherein the neural network is a radial basis neural network.
5. An apparatus for incorporating decision making into classifiers to provide efficient test recommendations as set forth in claim 3, wherein the combinatory search procedure performed by the explicit system is simulated annealing.
6. An apparatus for incorporating decision making into classifiers to provide efficient test recommendations as set forth in claim 5, wherein the explicit system and the profit module may be separated from the apparatus after the implicit system sufficiently mimics the explicit system.
7. Cancel
8. An apparatus for incorporating decision making into classifiers to provide efficient test recommendations as set forth in claim 1, wherein the classifier is a probabilistic model.
9. An apparatus for incorporating decision making into classifiers to provide efficient test recommendations as set forth in claim 8, wherein the classifier is Bayesian.
10. A computerized method for enhancing decision making in a classifier system, wherein the classifier system includes an explicit system and a classifier, each configured to receive a system state vector, with the explicit system connected with the classifier; a profit module connected with the classifier and with the explicit system; and an implicit system configured to receive a system state vector, and connected with the explicit system, the computerized method comprising the steps of:
 - a. receiving a system state vector in the explicit system, the classifier, and the implicit system;

- b. determining in the explicit system, based by the feature set, a recommended test;
 - c. performing the recommended test by the classifier;
 - d. determining, via the profit module, the profit from the test performed by the classifier;
 - e. detecting whether the test performed by the classifier maximizes the profit;
 - f. performing the receiving step a. through the detecting step a until a test is found which maximizes the profit;
 - g. training the implicit system with the system state vector and the test which maximizes the profit; and
 - h. repeating steps a. through g. until a desired level of training of the implicit system is reached.
11. A computerized method for enhancing decision making in a classifier system as set forth in claim 10, wherein the test that maximizes the profit is provided by either the explicit system or the implicit system to a controller.
12. A computerized method for enhancing decision making in a classifier system as set forth in claim 10, wherein the implicit system used is a neural network.
13. A computerized method for enhancing decision making in a classifier system as set forth in claim 12, wherein the implicit system used is a radial basis neural network.
14. A computerized method for enhancing decision making in a classifier system as set forth in claim 12, wherein the determining step b. is performed by the explicit system using a combinatory search procedure.

15. A computerized method for enhancing decision making in a classifier system as set forth in claim 14, wherein the combinatory search procedure performed by the explicit system in the determining step b. is simulated annealing.
16. A computerized method for enhancing decision making in a classifier system as set forth in claim 15, wherein the explicit system and the profit module used may be separated from the classifier system after the implicit system sufficiently mimics the explicit system.
17. Cancel
18. A computerized method for enhancing decision making into classifiers to provide efficient test recommendations as set forth in claim 10, wherein the classifier is a probabilistic model.
19. A computerized method for enhancing decision making into classifiers to provide efficient test recommendations as set forth in claim 18, wherein the classifier is Bayesian.
20. A computerized method for enhancing decision making in classifiers to provide efficient test recommendations, the computerized method comprising the steps of:
 - a. providing an explicit system and a classifier each configured to receive a system state vector, with the explicit system connected with the classifier, and operative to iteratively perform a combinatory search procedure based on the system state vector to develop a next test recommendation for the classifier, whereby the classifier performs the next test to generate an objective weighted score;

- b. providing a profit module connected with the classifier and with the explicit system to receive the objective weighted score from the classifier, to add subjective value to the objective weighted score to determine a profit for the test, and to provide the profit to the explicit system to enable the explicit system to assess the value of its next test recommendation, and, iteratively, to generate a best test recommendation based on the maximization of the profit;
 - c. providing an implicit system configured to receive a system state vector, and connected with the explicit system to receive the best test recommendation for each system state vector, and to act as a function estimator to learn to associate best test recommendations with the system state vector in order to mimic the explicit system, thereby to enable rapid decision making in situations that are either urgent or well-known.
- 21. A computerized method for enhancing decision making in a classifier system as set forth in claim 20, wherein the explicit system and the implicit system are further configured to provide the test recommendation to a controller.
- 22. A computerized method for enhancing decision making in a classifier system as set forth in claim 20, wherein the implicit system provided is a neural network.
- 23. A computerized method for enhancing decision making in a classifier system as set forth in claim 22, wherein the implicit system provided is a radial bias neural network.
- 24. A computerized method for enhancing decision making in a classifier system as set forth in claim 22, wherein the explicit system provided performs the combinatory search procedure by use of simulated annealing.
- 25. A computerized method for enhancing decision making in a classifier system as set forth in claim 24, wherein the explicit system provided and the profit module

provided may be separated from the classifier system provided after the implicit system sufficiently mimics the explicit system.

26. Cancel

27. A computerized method for enhancing decision making in classifiers to provide efficient test recommendations as set forth in claim 20, wherein the classifier is a probabilistic model.

28. A computerized method for enhancing decision making in classifiers to provide efficient test recommendations as set forth in claim 27, wherein the classifier is Bayesian.